

DEPARTMENT of ENVIRONMENTAL SERVICES
Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: LONG POND	Lake Area (ha):	11.49
Town: EATON	Maximum depth (m):	6.7
County: Carroll	Mean depth (m):	1.8
River Basin: Saco	Volume (m ³):	206500
Latitude: 43°53'15" N	Relative depth:	1.8
Longitude: 71°04'30" W	Shore configuration:	1.50
Elevation (ft): 462	Areal water load (m/yr):	37.13
Shore length (m): 1800	Flushing rate (yr ⁻¹):	20.60
Watershed area (ha): 673.4	P retention coeff.:	0.40
% watershed ponded: 2.1	Lake type:	natural

BIOLOGICAL:

9 January 1989

12 July 1988

DOM. PHYTOPLANKTON (% TOTAL) #1	ASTERIONELLA 90%	CHRYSPHAEERELLA 40%
#2		MELOSIRA 30%
#3		ASTERIONELLA 15%
PHYTOPLANKTON ABUNDANCE (cells/mL)		1730.0
CHLOROPHYLL-A (µg/L)		4.98
DOM. ZOOPLANKTON (% TOTAL) #1	KERATELLA 40%	KERATELLA 51%
#2	KELLICOTTIA 20%	NAUPLIUS LARVA 20%
#3	POLYARTHRA 20%	KELLICOTTIA 16%
ROTIFERS/LITER	25	490
MICROCRUSTACEA/LITER	3	171
ZOOPLANKTON ABUNDANCE (#/L)	30	665
VASCULAR PLANT ABUNDANCE		Scattered
SECCHI DISK TRANSPARENCY (m)		3.1
BOTTOM DISSOLVED OXYGEN (mg/L)	9.5	6.8
BACTERIA (fecal col., #/100 ml) #1		< 1
#2		< 1
#3		

SUMMER THERMAL STRATIFICATION:

stratified

Depth of thermocline (m): 3.0
Hypolimnion volume (m³): None

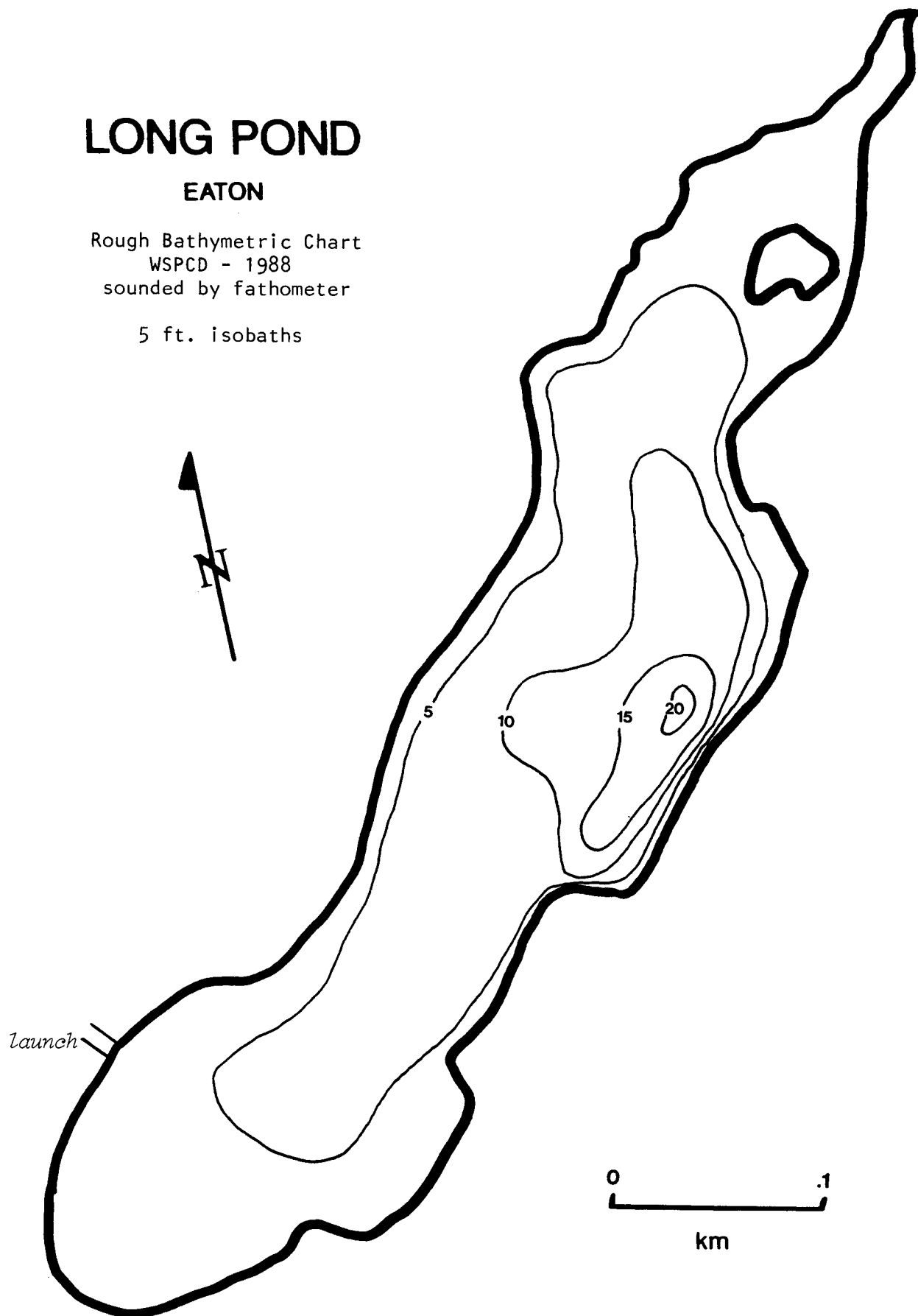
<u>CHEMICAL:</u>		Lake: LONG POND Town: EATON			
	9 January 1989		12 July 1988		
DEPTH (m)	2.0	4.0	1.0	3.0	5.0
pH (units)	6.5	6.5	7.0	6.9	6.8
A.N.C. (Alkalinity)	14.2	13.9	11.1	12.4	9.0
NITRATE NITROGEN	< 0.05	< 0.05	< 0.05		< 0.05
TOTAL KJELDAHL NITROGEN	0.14	< 0.10	0.20	0.10	0.30
TOTAL PHOSPHORUS	0.018	0.017	0.008	0.005	0.009
CONDUCTIVITY (μ mhos/cm)	63.0	59.6	53.7	54.0	44.6
APPARENT COLOR (cpu)	7	11	11	12	17
MAGNESIUM			0.62		
CALCIUM			4.2		
SODIUM			3.9		
POTASSIUM			0.50		
CHLORIDE	6	7	5		4
SULFATE	5	5	4		4
TN : TP	8		25		33
CALCITE SATURATION INDEX			2.6		
All results in mg/L unless indicated otherwise					
<u>TROPHIC CLASSIFICATION: 1988</u>					
	D.O.	S.D.	PLANT	CHL	TOTAL CLASS
	**	2	1	1	4 Oligo.
<u>COMMENTS:</u>					
1. Launch site was off a curve in Rt. 153 (dangerous with traffic) and was steep; parking was available for 3 cars and trailers.					
2. Steeply sloping land was along both sides of this long, narrow pond.					
3. The bottom at the deep spot was soft and mucky.					
4. Whole-water phytoplankton was 40% green algae and 30% diatoms; dominant genera were tiny green flagellates (20%) and <u>Synedra</u> (20%).					

LONG POND

EATON

Rough Bathymetric Chart
WSPCD - 1988
sounded by fathometer

5 ft. isobaths



[illegible]

TOWN: EATON
WEATHER: SUNNY, WARM

[illegible]

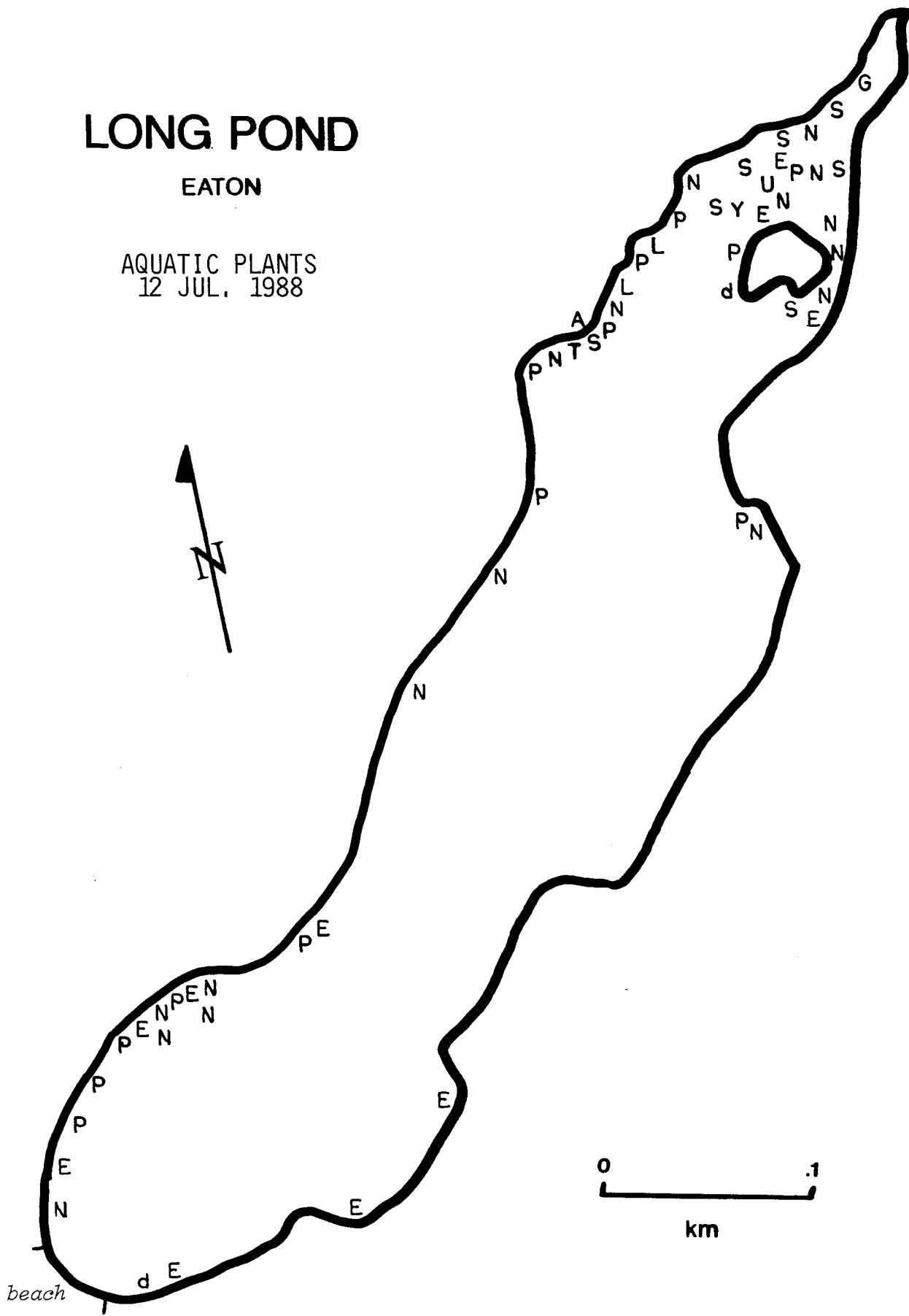
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SECCHI DISK (m):    3.1          COMMENTS:
BOTTOM DEPTH (m):   6.5
TIME: 1221
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*Dissolved oxygen values are in mg/L

LONG POND

EATON

AQUATIC PLANTS
12 JUL. 1988



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